

Remarks

The Office action dated September 3, 2004, in which the Examiner rejected pending claims 1-5, 7-18 and 20 and 23 has been reviewed. In view of the following remarks and amendments, Applicant respectfully submits that the application is in condition for allowance.

Claims 1, 9 and 13 have been amended, and claim 24 has been added. Support for new claim 24 can be found in the application at least at page 8, line 12 to page 9, line 7 and page 10, lines 2-5.

Claims 1, 5, 7, 9, 13 and 18 were rejected under 35 U.S.C. 102(b) as being anticipated by JP 01159234A, issued to Kato Hideji et al. (referred to hereinafter as the "Japanese reference") The Examiner stated that the Japanese reference teaches the claimed process in the translated abstract and Figs. 1-3, including teaching heating and pressure during a welding step, and arguing that the step of pressing in the reference is within the definition of "drawing" as implied by the instant specification. Rejected claims 1, 9 and 13 include all of the independent claims in the present application.

A first group of claims (claims 2-4, 8 and 23), a second group of claims (claims 10-12) and a third group of claims (claims 14-17 and 20) were rejected under 35 U.S.C. 103(a) as being unpatentable over the same Japanese reference for a variety of reasons.

To move the present application towards allowance, the Applicant has made an amendment to independent claims 1, 9 and 13 that is believed to distinguish the claimed methods over the teachings of the Japanese reference.

Present Application

The present application provides a significant improvement over the prior art by providing a more simple and efficient method for manufacturing floor mats shaped with the three dimensional profile of the interior of a vehicle floor and having integrally molded nibs on a surface of the mat to contact the contoured vehicle floor covering.

In one embodiment, after forming thermoplastic mat blanks with nibs on one side thereof, blanks are placed in a thermoform station with the nibbed side of the blank directed away from a surface of a molding tool. The molding tool is contoured to represent the profile of the interior of a vehicle floor, and for example, may have upwardly extending sidewalls and a top. The mat blank may then be heated by an oven and drawn towards the molding tool on a side of the blank opposite of the nibbed side. The hot plastic blank is pulled into contact and held against the molding tool surfaces (e.g., the upwardly extending sidewalls and a top) to form the mat, in one example, with a relatively flat base and a number of upstanding sidewalls, each of which may have nibs formed thereon. (See Figs. 5 and 6). Thus, not only are nibs capable of being formed on all of the mat outer facing surfaces, the nibs may be directed in the direction substantially perpendicular to such mat surfaces to grip the varied contour of the interior of a vehicle floor. (See page 8, line 6 to page 9, line 7; page 10, lines 2-6).

Each of amended independent claims 1, 9 and 13 require, among other things, that with the method step of drawing a heated sheet toward a contoured molding tool until the sheet is substantially shaped to the contour of the sidewall and the top surface of the tool, such heated sheet with first and second sides and forming the vehicle mat has (a) one portion thereof shaped to the contour of the sidewall of the tool with the second side having nibs extending therefrom, and (b) another portion thereof shaped to the contour of the top surface of the tool with the

second side having nibs extending therefrom, such that the nibs of the heated sheet portion shaped to the tool sidewall extend in a different direction than the nibs of the heated sheet portion shaped to the tool top surface. Producing such a vehicle mat with the claimed method is what provides the ability for the nibs to effectively grip the surfaces forming the three dimensional profile of the interior of the vehicle floor.

Cited Reference

The Japanese reference, in contrast appears to teach a method of vehicle mat manufacture utilizing a fibrous layer 3 and a reinforcement layer 6 provided with projections on the back. A sheet member (heel pad and label 8(9)) is welded to the surface of the fibrous layer. A spacer 30 on the backside of the reinforcement layer 6 to surround the projections on the reinforcement layer back to protect them during the welding step.

As can be seen in the figures of the reference, for example with respect to the progression of the manufacturing method shown in FIGS. 1 to 2 or FIGS. 6 to 7, any welding (and heat and pressure applied during welding) results in deformation or “shaping” of the fibrous layer 3 but not the reinforcement layer 6 where the projections are formed. Thus, any “shaping” of the reference mat merely involves applying the heel pad 8(9) to indent the fibrous layer 3. The reinforcement layer 6 with projections remains in the same planar form shown throughout the figures after the manufacturing steps. In terms of a contoured vehicle mat with three dimensional profile of the interior of the vehicle floor (as with the present invention), the reference merely teaches what is known in the prior art – a planar nibbed mat that is not properly shaped in such a three dimensional form.

The method claimed in the present application, in contrast, produces a vehicle mat or part having a contour that follows the profile of a molding tool having sidewalls and a top surface, so that the ribs on the side of the heated thermoplastic sheet opposite of the mold extend in different directions depending on whether such ribs are on the section of the sheet shaped to the sidewalls or to the top surface. (See Figs. 5 and 6 in particular). This structure is what provides the gripping ability for the mat on a varied vehicular floor contour, and a method to achieve such a structure is in no way taught or suggested by the cited Japanese reference.

Because the cited reference JP 01159234A does not provide the teachings or suggestions necessary to practice the method claimed in each of independent claims 1, 9 and 13, the cited reference fails to anticipate and/or render obvious claims 1, 9 and 13. As such, withdrawal of the rejections of claims 1, 9 and 13 under 35 U.S.C. 102(b) as being anticipated by JP 01159234A is respectfully requested.

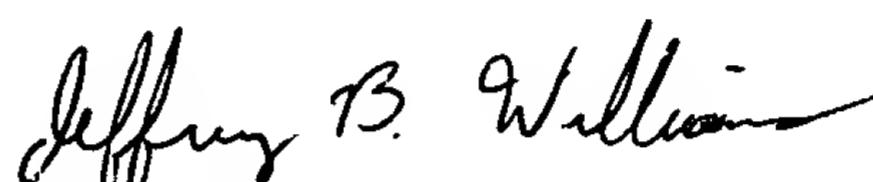
Claims 2-5, 7, 8, 23 and 24, claims 10-12 and claims 14-18 and 20 depend either directly or indirectly from independent claims 1, 9 and 13, respectively. As claims 1, 9 and 13 are believed to be allowable over the reference of record, Applicant respectfully asserts that claims 2-5, 7, 8, 10-12, 14-18, 20, 23 and 24 also are allowable. Therefore, the Applicant sees no specific reason to discuss the rejections of claims 2-5, 7, 8, 10-12, 14-18, 20 and 23 under 35 U.S.C. 102(b) or 35 U.S.C. 103(a) as either being anticipated by, or unpatentable over, JP 01159234A. Withdrawal of the rejections under 35 U.S.C. 102(b) of claims 5, 7 and 18, and under 35 U.S.C. 103(a) of claims 2-4, 8, 10-12, 14-17, 20 and 23, is respectfully requested.

Based on the foregoing, it is submitted that the Applicant's invention as defined by claims 1-5, 7-18, 20, 23 and 24 is patentable over the references of record. Issuance of a Notice of Allowance is solicited.

Should the Examiner believe that issues remain outstanding, the Examiner is welcome to call Applicant's undersigned attorney in an effort to resolve such issues and advance this application to issue.

The present amendment and response is being filed concurrently with a Request for Continued Examination along with a check in the amount of \$375.00 for a small entity pursuant to 37 C.F.R. 1.17(e). The Commissioner is hereby authorized to charge any additional fees that may be required, or credit any overpayment, to Deposit Account No. 19-2112.

Respectfully submitted,


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